Claims

I claim:

1. A harmonic stabilizer system for a rifle barrel comprising
   a) spring means having a first end attached to a section of a stock ahead of a recoil lug;
   b) adjustment means engaging said spring means to adjust a level of stabilization force applied by a second end of said spring means against the rifle barrel;

whereby said stabilizer system can be tuned for a particular rifle and bullet combination to greatly reduce shot scatter introduced by vibration of the rifle barrel during firing.

2. The harmonic stabilizer system of Claim 1 wherein said spring means comprises a coil spring.

3. The harmonic stabilizer system of Claim 1 wherein said spring means comprises a leaf spring.

4. The harmonic stabilizer system of Claim 3 wherein said leaf spring comprises a strip of spring steel having a thickness in the range between .018 and .024 inch.

5. The harmonic stabilizer system of Claim 3 further comprising a spring attachment spacer with a threaded internal bore for receiving a spring attachment screw through said first end of said leaf spring.

6. The harmonic stabilizer of Claim 3 wherein said leaf spring is contoured into an arcuate shape with a reverse camber tip portion on said second end thereof to enlarge a size of a contact region with the rifle barrel.

7. The harmonic stabilizer system of Claim 6 wherein said tip portion has an pad attached thereto interfacing between said tip portion and the rifle barrel.

8. The harmonic stabilizer system of Claim 7 wherein said pad is made of a material selected from the group consisting of NAVCOM elastomer, an

alternate elastomeric material, and shrink tubing.

9. The harmonic stabilizer system of Claim 1 wherein said adjustment means comprises an adjustable screw mounted in a portion of the stock upstream of said second end engaging the portion of the rifle barrel.

10. The harmonic stabilizer system of Claim 9 further comprising a spacer with an internal thread receiving said adjustable screw, said spacer being mounted in a portion of the stock.

11. The harmonic stabilizer system of Claim 1 wherein said portion of the rifle barrel engaged by said spring means comprises a rear portion of the barrel.

12. A rifle capable of improved shot scatter pattern comprising

a) a stock;

b) a rifle barrel having a first trailing end and a second forward end;

c) a harmonic stabilizer system for a rifle barrel including

i) spring means having a first end attached to a section of said stock ahead of a recoil lug;

ii) adjustment means engaging said spring means to adjust a level of stabilization force applied by a second end of said spring means against said rifle barrel;

whereby said stabilizer system can be tuned for a particular rifle and bullet combination to greatly reduce shot scatter introduced by vibration of said rifle barrel during firing.

13. The rifle of Claim 12 wherein said portion of said rifle barrel engaged by said spring means comprises a rear portion.

14. The rifle of Claim 12 wherein said spring means comprises a coil spring.

15. The rifle of Claim 12 wherein said spring means comprises a leaf spring.

16. The rifle of Claim 5 wherein said leaf spring comprises a strip of spring steel having a thickness in the range between .018 and .024 inch.

17. The rifle of Claim 15 further comprising a spring attachment spacer with a threaded internal bore for receiving a spring attachment screw through said

first end of said leaf spring.

18. The rifle of Claim 15 wherein said leaf spring is contoured into an arcuate shape with a reverse camber tip portion on said second end thereof to enlarge a size of a contact region with the rifle barrel.

19. The rifle of Claim 18 wherein said tip portion has an pad attached thereto interfacing between said tip portion and the rifle barrel.

20. The rifle of Claim 19 wherein said pad is made of a material selected from the group consisting of NAVCOM elastomer, an alternate elastomeric material, and shrink tubing.